

**What is claimed is:**

1. A double-stranded DNA comprising (a) an arrangement of A-C and (b-1) an arrangement of A'-C' or (b-2) an inverted arrangement of A'-C', wherein A and A' are each double-stranded DNA and are capable of undergoing reciprocal homologous recombination and one of A and A' is an inverted orientation of the other, C and C' are each double-stranded DNA and are capable of undergoing reciprocal homologous recombination and one of C and C' is an inverted orientation of the other, and at least one of A and C comprises a target gene for amplification, and any DNA sequence may be inserted among A, A', C and C'.  
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2. A double-stranded DNA comprising (a) an arrangement of A-B-C and (b-1) an arrangement of A'-B'-C' or (b-2) an inverted arrangement of A'-B'-C', wherein A and A' are each double-stranded DNA and are capable of undergoing reciprocal homologous recombination and one of A and A' is an inverted orientation of the other, B and B' are amplifying segments where at least one of B and B' containing at least one target gene for amplification, C and C' are each double-stranded DNA and are capable of undergoing reciprocal homologous recombination and one of C and C' is an inverted orientation of the other, and any DNA sequence may be inserted among A, A', B, B', C and C'.  
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3. The double-stranded DNA of claim 2, wherein B and B' are amplifying segments each containing at least one target gene for amplification arranged in the same orientation and are capable of undergoing reciprocal homologous recombination.  
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4. The double-stranded DNA of claim 3, wherein each of B and B' contains a selection gene for amplification arranged in the same orientation.  
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5. The double-stranded DNA of claim 1 comprising an arrangement of A-C-A'-C', wherein the symbols are the same as above.
6. The double-stranded DNA of claim 5 comprising an arrangement of A-C-D-A'-C', wherein D represents a double-stranded DNA fragment containing at least one break site by endonuclease and other symbols are the same as above.  
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7. The double-stranded DNA of any one of claims 2 to 4 comprising an arrangement of A-B-C-A'-B'-C', wherein the symbols are the same as above.
- 5    8. The double-stranded DNA of claim 7 comprising an arrangement of A-B-C-D-A'-B'-C', wherein D represents a double-stranded DNA fragment containing at least one break site by endonuclease and other symbols are the same as above.
- 10    9. The double stranded DNA of claim 1 comprising (a) an arrangement of E'-A-C and (b-1) an arrangement of A'-C'-E or (b-2) an inverted arrangement of A'-C'-E or (c) an arrangement of A -C-E and (d-1) an arrangement of E'-A'-C' or (d-2) an inverted arrangement of E'-A'-C', wherein E represents a telomere sequence and E' represents an inverted sequence of E and the other symbols are the same as above.
- 15    10. The double-stranded DNA of claim 9 comprising an arrangement of D-E'-A-C-D-A'-C'-E-D , D-E'-A-C-D-E'-C"-A"-D , D-A-C-E-D-E'-A'-C'-D or D-A-B-C-E-D-C"-B"-A"-E-D, wherein C"-A" represents an inverted arrangement of A'-C'.
- 20    11. The double-stranded DNA of any one of claims 2 to 4 comprising (a) an arrangement of E'-A-B-C and (b-1) an arrangement of A'-B'-C'-E or (b-2) an inverted arrangement of A'-B'-C'-E' or (c) an arrangement of A-B-C-E, and (d-1) an arrangement of E'-A'-B'-C' or (d-2) an inverted arrangement of E'-A'-B'-C', wherein E represents a telomere sequence and E' represents an inverted orientation of E and the other symbols are the same as above.
- 25    12. The double-stranded DNA of claim 11 comprising the arrangement of D-E'-A-B-C-D-A'-B'-C'-E-D , D-E'-A-B-C-D-E'-C"-B"-A"-D , D-A-B-C-E-D-E'-A'-B'-C'-D , or D-A-B-C-E-D-C"-B"-A"-E-D, wherein C"-B"-A" represents an inverted arrangement of A'-B'-C'.
- 30    13. A recombinant vector containing the double-stranded DNA of any one of claims 1 to 12.

14. A transformant transduced with the double-stranded DNA of any one of claims 1 to 8.
15. A recombinant plasmid integrated with the double-stranded DNA of any one of claims  
5 9 to 12.
16. A method for gene amplification comprising the steps of preparing the transformant of  
claim 14 and amplifying the target gene.
- 10 17. The method for gene amplification of claim 16, wherein the transformant is treated  
with an endonuclease in the step of amplifying the target gene, when the double-stranded  
DNA is represented as A-C-D-A'-C' or A-B-C-D-A'-B'-C', wherein the symbols are the  
same as above.
- 15 18. The method for gene amplification comprising the steps of transducing bacteria with  
the plasmid of claim 15 and culturing the bacteria.
19. The method for producing a protein encoded by the target gene for amplification  
comprising the steps of culturing cells or bacteria obtained by the method of any one of  
20 claims 16 to 18.